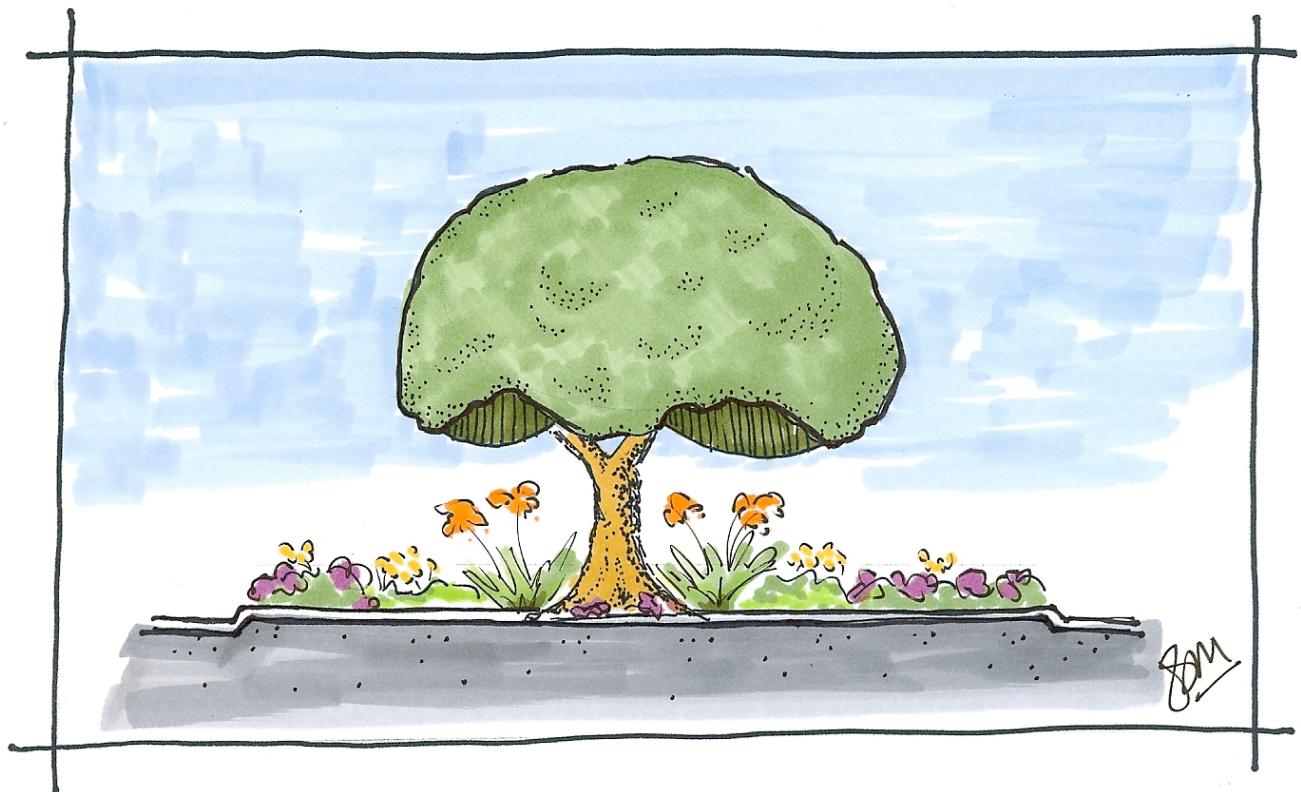


Parkway Design

Creating Water-Wise Landscapes



... A few good things to know

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Parkway Design

Creating Water-Wise Landscapes

1 Rule as it regards water-wise landscape design: Get Rid of the Lawn!

Or at least the part that doesn't serve a good (useful-practical) purpose. Turf grasses (lawns) are the highest water users in the landscape, hands down. Can we have grass and still be water wise? The answer is yes, but a lawn area must "earn its space". Our customary use of turf grass needs to be thoughtfully re-considered. As lovely as a green park-like expanse can be, the fact remains: it is not sustainable. Water is NOT a renewable resource - in the case of suburban demand - we just don't have it to spare. We can no longer rely on lawn areas as the default-go-to landscape solution. This long-established "solution" is now a big part of the problem.

All design begins with some sort of criteria, a set of rules or limits. Form Follows Function is the fundamental principal in my design philosophy. It is always the first question I ask when determining the criteria for any project. When I say the turf grass must "earn its space" it is the result of this thinking. Criteria-Objective: we need to apply less water to the landscape - turf grasses have a very high water demand - if and when grass is used it must do more than just lie there and look pretty... So take a moment - consider the parkway and the fact that:

1. a lot of water is applied to the turf in these parkways to keep them green
2. a lot of water also runs down the street every morning in every neighborhood because irrigating a parkway efficiently with sprinklers is a challenge
3. what is it that we do on these 4 to 7 ft wide patches of grass... Play soccer? Have a picnic, take a nap? Nope.

So re-designing a parkway and getting rid of the grass makes good sense.

Relative to sustaining turf, it takes about 75% less water to support a colorful low maintenance garden as described in this workshop.

Re-thinking the traditional use of grass in the landscape opens the door to new creative design alternatives that incorporate color, texture, fragrance, and habitat... It's a good thing.

A Few Things to Know Before You Start:

- A no-fee encroachment permit is required for this project. Call the Water Resources group at (951) 736-2234 for the permit application.
- Call before you dig... At least 2 days before, to locate underground utilities like electric. The Phone number: 1-800-227-2600 or 1-800-422-4133. Hours are Monday thru Friday 6am to 7pm. If you need more information Google: SCE dig alert on the web.
- Fire Hydrants: If you have one, you must leave a 3 ft clearance area all the way around it - no plants of any kind, mulch only.
- No structures are allowed in the parkway - only mailboxes and utilities.
- Any pavers need to be pervious.

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Step One – Prepare the Site

Getting Rid of the Turf

Most parkways are growing full of whatever blows in from the neighbors. In addition, mow blow and go gardening practices spread Bermuda and crab grasses as mowers and weed-whackers drop cuttings from one yard onto another. The only really effective way I know to eradicate these weedy grasses is to use an herbicide like Round-up. Success is all about the prep; how well you begin anything is usually how well it will turn out. Simply digging up the grass will not do the trick. Bermuda grows from little roots called stolens and they will tenaciously hang on in the soil, being opportunistic, any bit of water will cause them to grow. You can spend a lot of time, effort and money on this task only to be discouraged when your new parkway is infested with weedy Bermuda and that low maintenance garden I promised you is just another item on your Saturday morning chores list... We are trying to avoid that!

Round-up is a non selective herbicide in liquid sprayable form that is applied to the foliage and taken in by the plant clear down through the root system. 41% concentrate Round-up is what most contractors use. It seems to work better than the pre-mixed solutions of the same, I know it should not make a difference, but it seems to. Mix according to directions. Apply Round-up when the breeze is not moving. Keep in mind this is a non-selective Herbicide and if it drifts in the wind it can kill any plant it gets on. Round-up works best when a plant is vigorously growing, so please don't turn the water off thinking you are killing your lawn, more than likely it is just going dormant and will spring back to life when water becomes available again, the crab grass and the Bermuda will anyway. So spray the turf, give it a few days to a week to die. Hot weather speeds up this process. Remove the dead sod with a square point shovel. I don't recommend composting, unless your compost pile runs pretty 'hot' because of the weedy Bermuda stolens.

After raking out the area, now free of sod, irrigate again for a few days, the objective being to get anything that is still in the soil to grow or germinate. If weeds and Bermuda show after a week or so, spray again. Clean the area again. Depending on how big the second crop of weeds was you may want to go through a third cycle, until the area when irrigated does not produce a crop of weeds, or least not very many.

Soil Preparation

This next step assumes that you have a clean-as-a-whistle parkway with no grass. Now is a good time to add amendments, such as gypsum that can improve drainage of heavy clay soils or more top soil if necessary. Use a landscape rake to establish a rough grade.

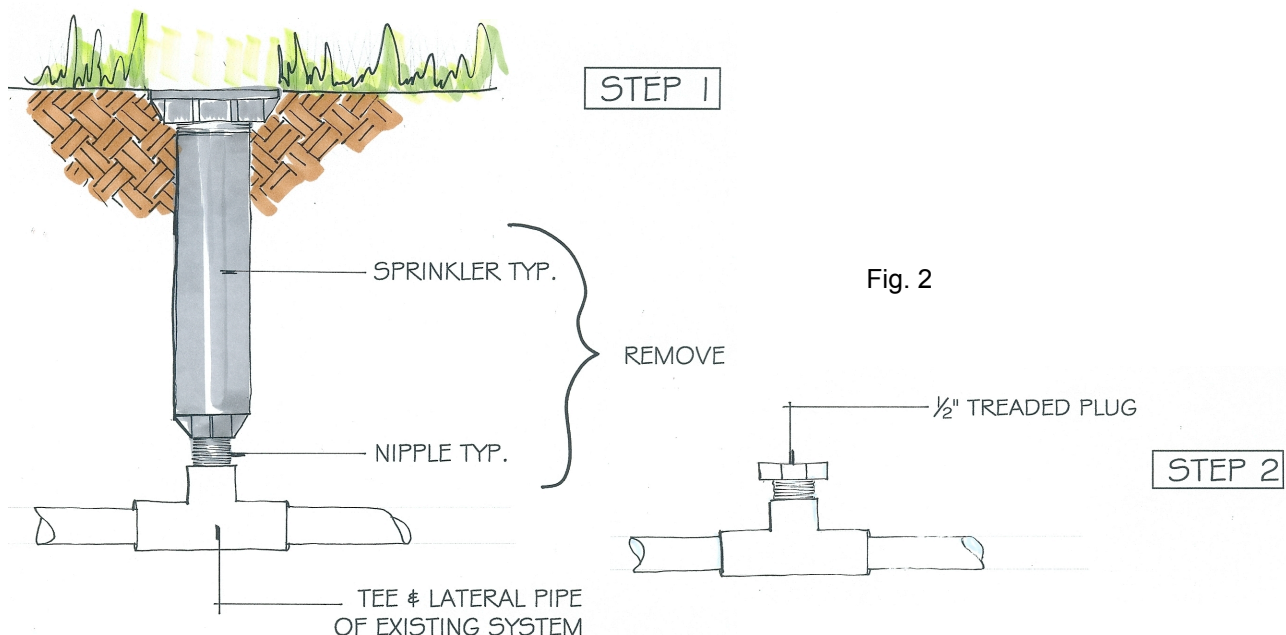
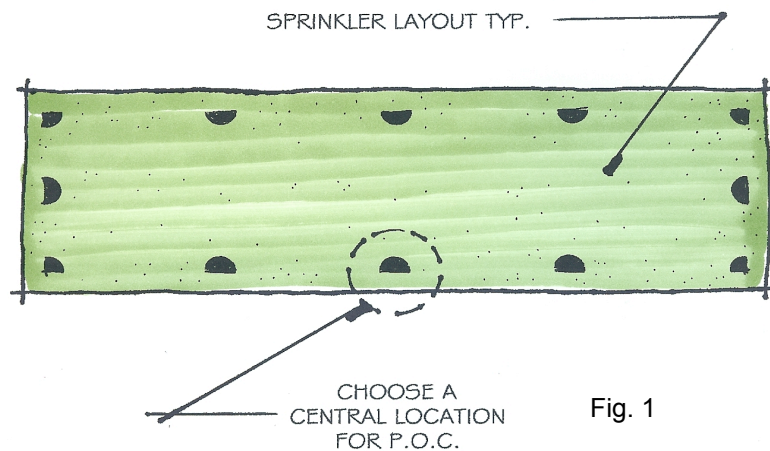
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Step Two – Drip Irrigation

Drip Irrigation

Drip irrigation has come a long way. It works, and it is not difficult for a homeowner to install. Retro-fitting an existing sprinkler system over to drip is very simple.

The first step is to select a point of connection or P.O.C., this will be the location of one of the existing sprinklers, the best choice is one centrally located – see fig. 1. Then remove all of the sprinklers, and the sch 80 nipple, (see step 1) plugging the opening of the fitting with a threaded plug (step 2) as shown in fig.2. This happens at each sprinkler location except where you are going to make your point of connection P.O.C.

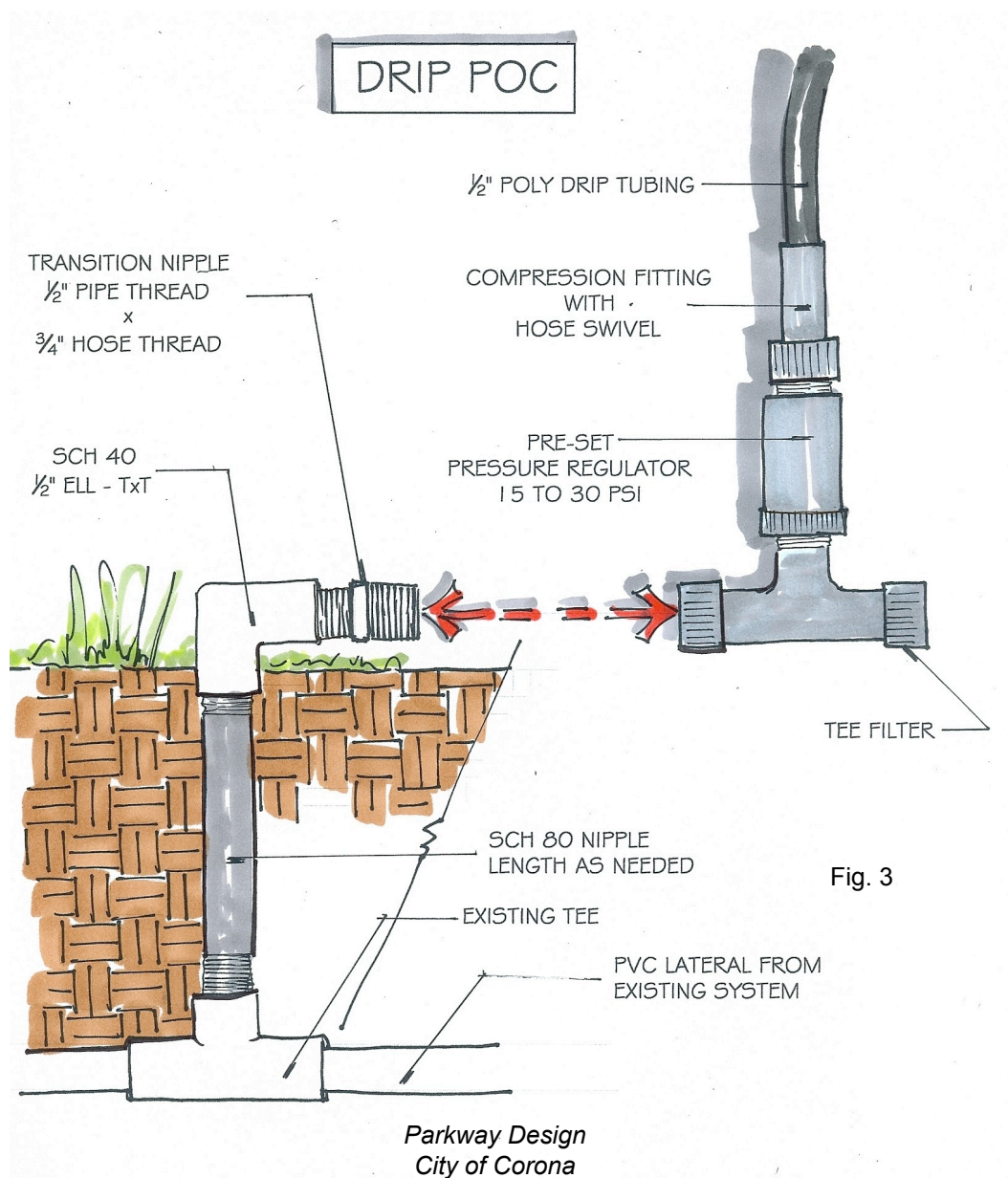


Drip Irrigation

Every drip system needs filtration and reduced pressure. These things can be added at the valve, and if it is a completely new system it should be, but for an existing system it is often easier to do it at one of the most central points of the lateral lines (where you have removed the sprinklers).

P.O.C. Point of connection. This is what I am calling that one location where the drip system is going to hook up, you have removed the sprinkler and the short nipple, but this time instead of the ½ inch plug you will put together the drip assembly that provides filtration, pressure reduction and a way to connect the flexible drip tubing. See fig. 3.

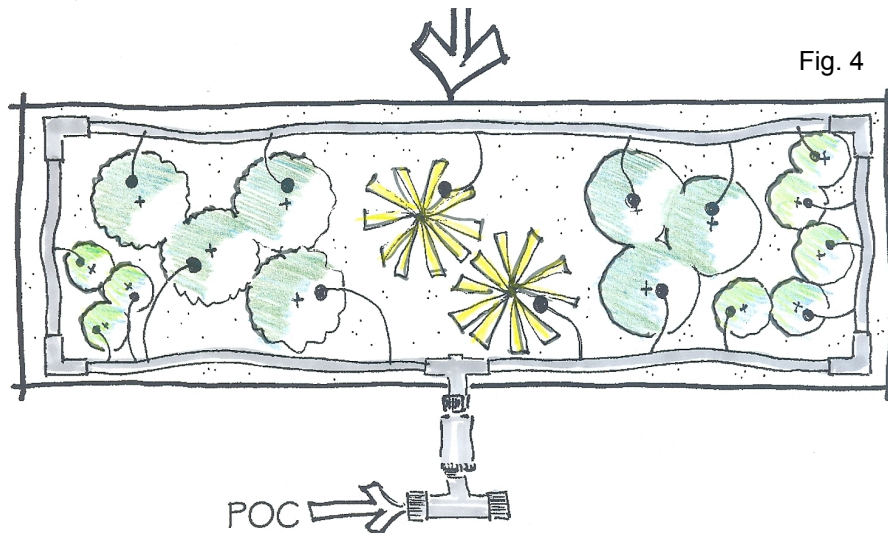
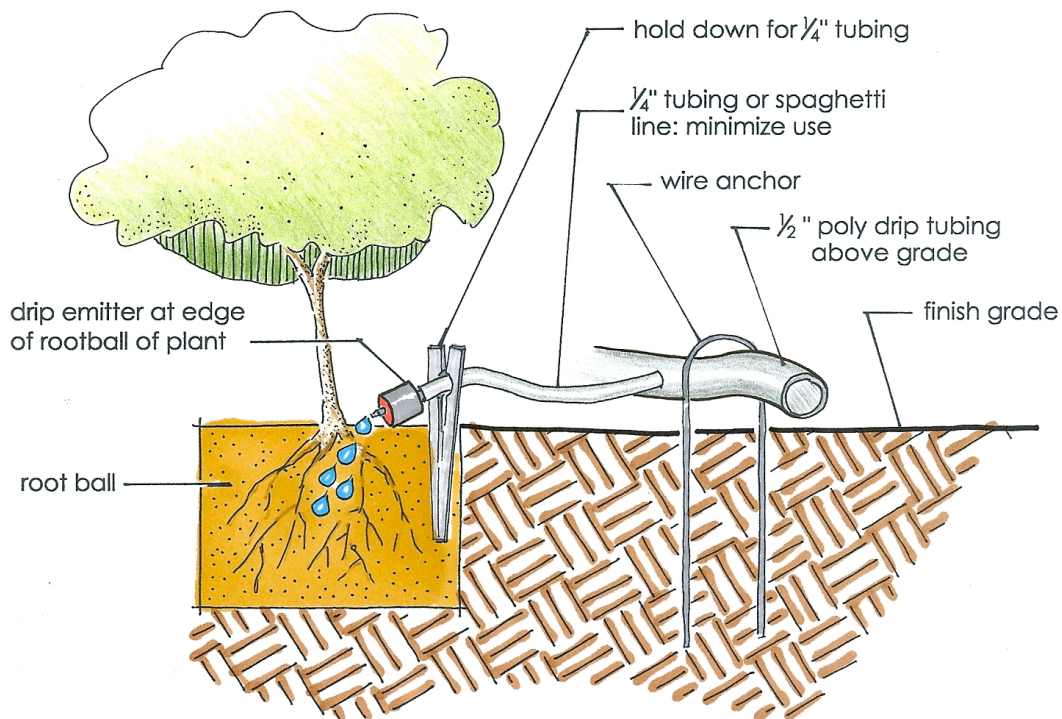
Are there other ways to do this? Yes, but this way really works well – my motto “build it like a Buick”. This is pretty bullet-proof. The entire assembly lays on the surface of the ground. It is important to never bury a pressure regulator, they need to ‘breathe’. The tubing and assembly will be covered with mulch when everything is finally planted.



Drip Irrigation

The final layout of the drip tubing will look something like this. Looping the system, although not necessary, is a good idea. The $\frac{1}{2}$ " poly drip tubing is installed on top of the ground. Once this is done the plants can be planted. Then the emitters are installed, located at the edge of the root ball of each plant, as shown in the diagram below.

A small amount of $\frac{1}{4}$ " tubing or "spaghetti" line can be used to reach from the main tubing to the plant, but do not exceed 12 inches. Too much of this small tubing creates a maintenance headache...

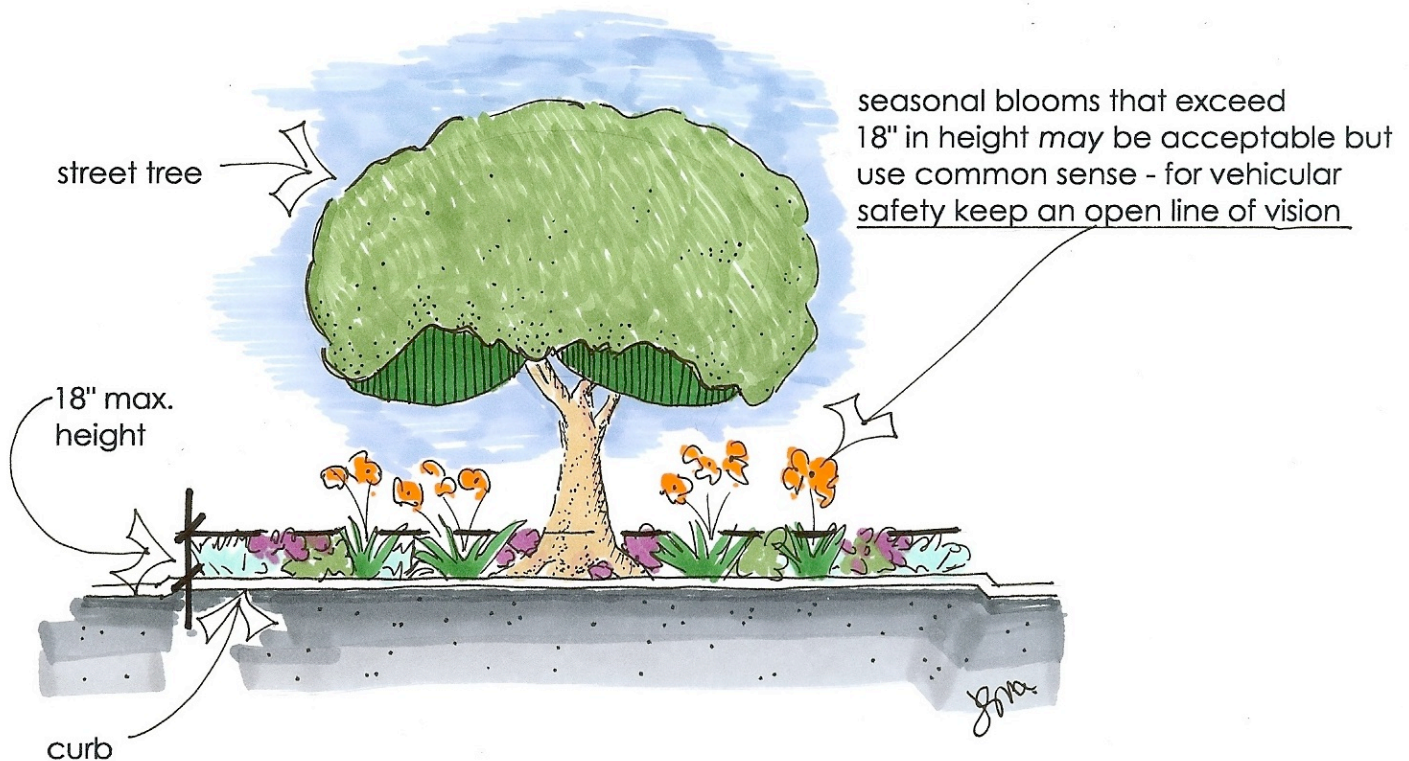


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Step Three - Planting

Plant Selection

A clear line of sight is essential for safety when considering plant materials for the parkway. Generally plants for a parkway should grow 18" or less. There are a few plants on the list that have flower stalks that exceed that 18" height, but it is assumed that this is not dense foliage and can be seen through. If, after a time, a plant grows beyond the recommended height, either prune it or remove it. Use common sense - do not block the view for traffic safety.



The plant selection in this handout is based upon a few things:

1. These plants are low in their water demand
2. These plants are well adapted to our climate
3. These plants are fairly easy to grow
4. They do well on a drip system
5. These plants do not require much in the way of maintenance

A Word About Purchasing Nursery Stock...

Building in success – this is what I always ask myself – what does that look like? The answer in regards to planting is: begin with the best and most vigorous material available. Most of the plant selections in this handout are tough and easy to grow, but knowing a couple of things when purchasing plant material can really help.

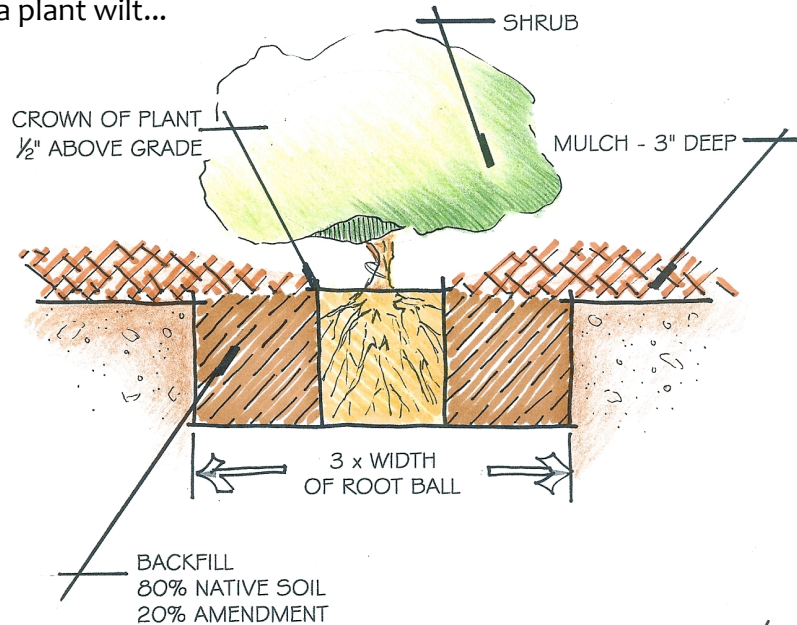
1. A plant that is huge for its container is NOT a bargain, it is a plant that was not shifted up to the next size container, more than likely it has a root system that may not be able to support the future growth of the plant. If a plant is very large check to see if it is rooted to the ground below. A few light roots grown into the nursery ground is probably OK but if it requires a really strong tug to get it free, pass on it.
2. This next item is related to root systems that have not been shifted up. Its called 'girdling'. It means the plant was left in a pot too long and the roots of that plant have circled around and around inside the container. Best to avoid this also. You can take a look at the top of the plant where it comes out of the soil, if you see what looks like circling roots, pass on this too.



Roots of a lantana are 'girdled' - this plant lost vigor and died suddenly after a years growth...

Planting:

Recommended size: I like a maximum size of 1 gallon – 4 inch pots can work too. If you are using plants that typically are sold by the flat and plan on irrigating with a drip system, cut the flat like a pan of brownies and use a good fat square about the size of the palm of your hand, a dripper can water this pretty well, but be aware that the root system of a plant grown in a flat is going to be shallow, do not expect the drip system to sustain these plants in the beginning weeks (maybe a couple of months) during the establishment period. Its not a big deal, just keep your eye on newly planted material and provide additional hand watering here and there if things are looking dry - but !! - Make sure the root zone of the plant is on the dry side before you water – overly wet soils can cause root rot and that can also make a plant wilt...



Container planting – just a few things to know:

1. The hole should be dug equal to the depth of the root ball, and 3 times as wide. The final position of the plant should be a tad above grade (about 1/2" for a 1 gallon plant, up to 1-1/2" for a 24" box tree). Objective here is to avoid burying the root crown: that place where the main stem or trunk of the plant disappears into the soil.
2. Backfill - only about 20% amendments please, meaning organic composted humus. If drainage is very bad, gypsum can be worked into the soil as well. But the act of digging out the native soil, removing large rocks, then putting it back is pretty much the common thinking these days.
3. After all planting is done, if a drip system is being used, the next step will be emitters installed to each plant. See fig. 4 page 6.
4. A pre-emergence product can be applied once the irrigation system is complete. This is a chemical in either dry granular or sprayable forms – it can be an effective form of weed control when applied to a 'clean slate'. A pre-emergence product will not harm growing plant tissue, it won't kill your good plants, it also will not kill growing weeds – what it does do: prevents the germination process so weed seeds will not grow once the irrigation is turned on.
5. Last apply a good 3 inch thick layer of mulch – preferable a medium grind wood mulch. Rocks (small ones) count as mulch also, but please natural colors only. Make sure rock, bark and mulch are flush to the curb.

Plant List for Parkways

The following plants are listed with common name first – if there is no common name the letters NCN (No Common Name) will appear, then the botanical name. I know the Latin botanical names can seem intimidating but there are many plants that share common names and it really is the only way to definitively identify plants. Even if you can't pronounce them, having some idea of what genus and species are is helpful. I would also encourage you to get a copy of the Sunset Western Garden Encyclopedia, it is a wonderful resource. Note: plants that are especially attractive to bees are marked with **.

Ground Covers

Best in Full Sun:

Juniper species that are under 12" – most are very wide, some up to 10ft – know what your are buying and plan spacing of plants accordingly.

Germander – Teucrium chamaedrys 12" x 2 to 3 ft wide / plant 3ft O.C. / lavender flowers**

Trailing Lantana – Lantana montevidensis 18" x 3ft / plant 3' O.C. / purple / yellow / white flowers

Ice Plant – Lampranthus spp. 8"x 3ft / plant rooted cuttings from flats at 12" O.C.

bright blooms: red / orange / yellow

Mexican Evening Primrose – Oenothera berlandieri 12" x 3ft / plant 3' O.C. / pink flowers

NCN – Verbena rigida 12 to 18" tall x 3ft wide / plant 3' O.C. / purple flowers

Best with Some Shade in PM:

Succulents – Echeveria spp. / Hens & Chicks - plants generally are under 12" tall and spread by making 'pups'. Most common is E. x imbricata.

Creeping Mahonia – Mahonia repens / 1ft x 3ft / plant 3' O.C. / winter foliage bronze-pink / spring flowers – yellow

Sun or Shade:

Asian Jasmine – Trachelospermum asiaticum – 12" to 18" x 4ft / plant 3' O.C. / flowers small & white

Chalk Plant – Senecio mandraliscae 12 to 18" x 2ft / plant 2' O.C. / blue-gray succulent foliage

Snow in Summer – Cerastium tomentosum 6" x 1ft / plant rooted cuttings from flats at 12" O.C.

Ground Morning Glory – Convolvulus mauritanicus 8" x 3ft / plant 3' O.C. / blue flowers

Perennials

Best in Full Sun:

Yarrow gray leafed types – Achillea x taygetea 'Moonshine' or A. tomentosa 18" x 2ft / Plant 3ft O.C. / yellow flowers.

Best in with Some Shade in PM:

Coral Bells 'Wendy' – Heuchera Rancho Santa Ana hybrids - 1 to 2 ft tall x 2 to 4 ft wide / pink blooms

Sun or Shade:

Scented Geraniums – Pelargonium species 18" or less in height / many species are well suited as ground covers, most will provide interesting foliage, the flowers can be sweet but generally small and sometimes insignificant. P. sidoides in particular is a good one.

Small Shrubs

Best in Full Sun:

Lavender Cotton – Santolina chamaecyparissus 12 – 18” tall x 3 ft wide / plant 4 ft O.C. / yellow blooms – gray foliage / great accent

NCN – Salvia chamaedryoides 12 – 18” tall x 3ft wide – plant 3ft O.C. / dark cobalt blue flowers – gray foliage

Sun or Shade:

Dwarf India Hawthorn – Rhamphiolepis indica ‘Ballerina’ (other varieties will be too tall for parkway use) 2ft x 4 ft / plant 4ft O.C. / pink blooms in spring / winter foliage reddish

Small Grasses

Sun or Shade:

Blue Moor Grass – Sesleria caerulea 8” x 12” – plant 12” O.C. / a great little grass that adds texture and movement, a very tough plant. Flowers in spring, cute!

Blue Fescue – Festuca o. glauca 12” tall x 12” wide – plant 12” O.C. Great blue –gray foliage accent

Mexican Feather Grass – Nassella tenuissima 2 ft tall x 2 to 3ft wide / wonderful texture / can self sow, but should not be invasive with limited water and drip irrigation.

Bulbs

Spring bloom – use Daffodils & Bearded Iris

Summer Bloom – Crocosmia an African native that blooms dark orange-red.

All bulbs continue to make ‘babies’ multiplying year after year.

PLANT NOTES:

Design Tips - Pulling it All Together

So far we have a (theoretical) empty parkway, a drip system and a plant list – now what?

How do you pull it all together so the finished product looks great?

The objective in good design is to wind up with a project that is focused, balanced and unified. Here are few simple guidelines that when applied, will give great results.

What NOT to do:

1. Kid in a candy store syndrome... First & last on my list of *what not to do*. I am pretty sure this is not a bonafide syndrome like Tourette's but it ought to be; its just as annoying. The kid-in-a-candy-store-syndrome is where you want one of everything, you can't make up your mind, you can't say no and you wind up with: one of these, one of those, and Oh! I need that one, and there! That one too... It is tempting, but avoid it that's all I gotta say. The result is unfocused and chaotic - in the end there is no 'design' just a jumble of unrelated random elements.

Good stuff you can do:

1. Color – nothing pulls together a unified look like a well thought out color scheme. A person can certainly spend years studying color theory, but you can also simply pick a palette and stick to it – I guarantee you will love the results.
 - Monochromatic: this is so easy - just pick a color, that's your criteria. Example: purple. Everything in your design, if it blooms, will be purple. Monochromatic White is classic and gives a fresh crisp look, especially during hot weather.
 - Analogous Palette: these are colors closely related and next to each other on the color wheel, such as yellow through orange, or blues to lavender to dark purple or pale pinks through to deep dark reds...
 - Pastel Palette: this palette creates a serene effect. It is made up of - all blues, all purples, clear pinks and white.
 - Hot Palette: this palette is energetic, lively. The colors are: blues, reds, orange, yellow and white.
 - A note about white and foliage color – white helps define other colors around it, gives them a bit of 'sparkle' so using it anywhere is a good thing. Remember foliage is a color too, green of course as well as some of the 'blue' grasses or gray plants. Gray looks great with just about any other color and can be thought of as a 'white'.
2. Choose a plant palette – this goes back to the kid in a candy store... Limit the selection of plants to one to two ground covers or low shrubs and then one or two perennials or seasonal bulbs. Use at least 3 to 5 plants of any selection and carry them through the entire design.
3. Repetition. Consider the rest of the yard also – 'nothing is designed in isolation' is a principle that is important but often over-looked. Consider the whole effect. Right now you are focused on one area – the parkway, but the entire front of your property is what will be in the final view. Think about adding some of the parkway palette to the rest of the planting beds in your front yard. Carrying through one or even a few of the selections will create a feeling of unity. Its sort of like: those might be a fabulous pair of shoes, but when you get the purse and the belt to match – watch out, you're looking sharp now.